

1 **CLAIMS**

2 1. A software-implemented video rendering system comprising:

3 a video application configured to enable a user to combine multiple
4 different video clips; and

5 a bitmap processor operatively coupled with the video application and
6 configured to receive a first bitmap that can be used to render a transition between
7 video clips and automatically process the first bitmap to provide a different
8 transition between video clips.

9
10 2. The software-implemented video rendering system of claim 1, wherein the
11 bitmap processor is configured to process the first bitmap to provide a second
12 bitmap that is different from the first bitmap, the second bitmap being configured
13 to render the different transition.

14
15 3. The software-implemented video rendering system of claim 1, wherein the
16 bitmap processor comprises multiple modules each of which being configured to
17 operate upon the first bitmap to provide either or both of (1) a different bitmap or
18 (2) a transition that is different from the transition provided by the first bitmap.

19
20 4. The software-implemented video rendering system of claim 3, wherein one
21 of the modules comprises a shrinking/stretching module that is configured to
22 shrink or stretch, respectively, the first bitmap.

1 5. The software-implemented video rendering system of claim 3, wherein one
2 of the modules comprises a replication module that is configured to replicate the
3 first bitmap.

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5 6. The software-implemented video rendering system of claim 3, wherein one
6 of the modules comprises an offset module that is configured to provide a
7 transition that is offset from a transition provided by the first bitmap.

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9 7. The software-implemented video rendering system of claim 3, wherein one
10 of the modules comprises a border module that is configured to provide a border in
11 a transition defined by the first bitmap.

12

13 8. The software-implemented video rendering system of claim 3, wherein the
14 one or more modules comprise modules selected from a group consisting of:

15 a shrinking/stretching module that is configured to shrink or stretch,
16 respectively, the first bitmap;

17 a replication module that is configured to replicate the first bitmap;

18 an offset module that is configured to provide a transition that is offset from
19 a transition provided by the first bitmap; and

20 a border module that is configured to provide a border in a transition
21 defined by the first bitmap.

1 9. The software-implemented video rendering system of claim 1, wherein the
2 bitmap processor is configured to receive one or more parameters provided by a
3 user and use those parameters to process the first bitmap.

4

5 10. The software-implemented video rendering system of claim 9, wherein the
6 bitmap processor is configured to use the one or more parameters to change the
7 structure of the first bitmap.

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9 11. Computer-readable media having software code that implements the video
10 rendering system of claim 1.

11

12 12. A method of displaying a video comprising:
13 selecting a bitmap that defines a first transition that can be used to
14 transition between video clips;
15 operating upon the bitmap to provide a second transition that is different
16 from the first transition by using one or more parameters that are provided by a
17 user, the parameters being used to operate upon the bitmap; and
18 effecting the second transition between video clips.

19

20 13. The method of claim 12, wherein said operating comprises providing a
21 second bitmap that is different from the first-mentioned bitmap.

22

23 14. The method of claim 12, wherein said operating comprises stretching the
24 first-mentioned bitmap.

1 **15.** The method of claim 12, wherein said operating comprises shrinking the
2 first-mentioned bitmap.

3
4 **16.** The method of claim 12, wherein said operating comprises at least one of
5 stretching and shrinking the first-mentioned bitmap.

6
7 **17.** The method of claim 12, wherein said operating comprises replicating the
8 first-mentioned bitmap.

9
10 **18.** The method of claim 12, wherein said operating comprises offsetting the
11 first-mentioned bitmap.

12
13 **19.** The method of claim 12, wherein said operating comprises providing a
14 border that is used in connection with the first-mentioned bitmap to effect the
15 second transition.

16
17 **20.** The method of claim 12, wherein said operating comprises one or more of:
18 stretching the first-mentioned bitmap;
19 shrinking the first-mentioned bitmap;
20 replicating the first-mentioned bitmap;
21 offsetting the first-mentioned bitmap; and
22 providing a border that is used in connection with the first-mentioned
23 bitmap to effect the second transition.

1 **21.** A video application that is programmed to implement the method of claim

2 12.

3

4 **22.** One or more computer-readable media having computer-readable
5 instructions thereon which, when executed by a computer, implement the method
6 of claim 12.

7

8 **23.** A method of displaying a multi-media editing project comprising:

9 receiving one or more parameters from a user, the parameters being
10 associated with a multi-media editing project and relating to a transition that can
11 be applied between two video clips in the project;

12 selecting a bitmap that defines a first transition that can be used to
13 transition between the video clips;

14 operating upon the bitmap to provide a second transition that is different
15 from the first transition by using the one or more parameters; and

16 effecting the second transition between video clips.

17

18 **24.** The method of claim 23, wherein said operating comprises providing a
19 second bitmap that is different from the first-mentioned bitmap.

1 **25.** The method of claim 23, wherein said operating comprises one or more of:
2 stretching the first-mentioned bitmap, shrinking the first-mentioned bitmap,
3 replicating the first-mentioned bitmap, offsetting the first-mentioned bitmap, and
4 providing a border that is used in connection with the first-mentioned bitmap to
5 effect the second transition.

6

7 **26.** The method of claim 23, wherein said receiving comprises receiving
8 parameters that define a range that, in turn, defines a border thickness of a border
9 that is used in connection with the first-mentioned bitmap to effect the second
10 transition.

11

12 **27.** One or more computer-readable media having computer-readable
13 instructions thereon which, when executed by a computer, cause the computer to:

14 select a first bitmap associated with a transition that can be applied between
15 two video clips in a video editing project;

16 operate upon the first bitmap to provide a second bitmap that is different
17 from the first bitmap by using one or more parameters that are provided by a user,
18 the first bitmap being operated upon by operations comprising one or more of the
19 following operations: stretching, shrinking, replicating, and offsetting; and

20 use the second bitmap in a transition between at least two videos.

21

22 **28.** A software-implemented method of displaying a multi-media editing
23 project comprising:

24 providing a user interface (UI) through which a user can enter one or more
25 parameters that can be used to manipulate a bitmap-defined transition;

1 receiving one or more parameters that are entered by a user via the UI;
2 selecting a first bitmap associated with the one or more parameters entered
3 by the user;

4 automatically operating upon the bitmap to provide a second bitmap that is
5 different from the first bitmap by using the one or more parameters that are
6 provided by a user, said operating comprising performing one or more of the
7 following operations on the first bitmap: stretching, shrinking, replicating, and
8 offsetting; and

9 using the second bitmap in a transition between at least two videos.

10
11 **29.** A multi-media project editing application programmed to implement the
12 method of claim 28.

13
14 **30.** A multi-media project editing system comprising:

15 a software implemented bitmap processor configured for use in connection
16 with a multi-media editing application to effect a transition between different
17 videos, the bitmap processor being configured to:

18 receive one or more parameters from a user;

19 select a first bitmap that is to be used to render a first transition
20 between two videos;

21 operate upon the first bitmap in accordance with the one or more
22 parameters to provide a second transition that is different from the first
23 transition; and

24 apply the transition between two videos.

1 **31.** The multi-media project editing system of claim 30, wherein the bitmap
2 processor operates upon the first bitmap to provide a second bitmap that defines
3 the second transition.

4

5 **32.** The multi-media project editing system of claim 31, wherein the bitmap
6 processor is configured to rescale the second bitmap so that it contains a
7 predetermined number of gray scale values.

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9 **33.** The multi-media project editing system of claim 31, wherein the bitmap
10 processor can operate upon the first bitmap by stretching the first bitmap.

11

12 **34.** The multi-media project editing system of claim 31, wherein the bitmap
13 processor can operate upon the first bitmap by shrinking the first bitmap.

14

15 **35.** The multi-media project editing system of claim 31, wherein the bitmap
16 processor can operate upon the first bitmap by stretching or shrinking the first
17 bitmap.

18

19 **36.** The multi-media project editing system of claim 31, wherein the bitmap
20 processor can operate upon the first bitmap by replicating the first bitmap.

21

22 **37.** The multi-media project editing system of claim 31, wherein the bitmap
23 processor can operate upon the first bitmap by offsetting the first bitmap.

1 **38.** The multi-media project editing system of claim 30, wherein the bitmap
2 processor can operate upon the first bitmap to provide a border within a transition
3 that is defined by the first bitmap.

4

5 **39.** A method of displaying a multi-media editing project comprising:
6 selecting a bitmap comprising multiple pixels, each pixel being capable of
7 having one of a number of predetermined gray scale values, the bitmap being
8 configured for use in effecting a transition between two videos in a multi-media
9 editing project;

10 operating upon the selected bitmap to provide a second bitmap that is
11 different from the first bitmap by using one or more parameters that are provided
12 by a user;

13 rescaling the second bitmap to ensure that pixels of the second bit map
14 have, collectively, all of the predetermined gray scale values; and

15 using the second bitmap in a transition between at least two videos.

16

17 **40.** The method of claim 39 further comprising receiving one or more
18 parameters specified by a user.

19

20 **41.** The method of claim 39, wherein said operating comprises stretching the
21 selected bitmap.

22

23 **42.** The method of claim 39, wherein said operating comprises shrinking the
24 selected bitmap.

1 **43.** The method of claim 39, wherein said operating comprises at least one of
2 stretching or shrinking the selected bitmap.
3

4 **44.** The method of claim 39, wherein said operating comprises replicating the
5 selected bitmap.
6

7 **45.** The method of claim 39, wherein said operating comprises offsetting the
8 selected bitmap.
9

10 **46.** The method of claim 39, wherein said operating comprises one or more of:
11 stretching the selected bitmap, shrinking the selected bitmap, replicating the
12 selected bitmap, and offsetting the selected bitmap.
13

14 **47.** A multi-media project editing application programmed to implement the
15 method of claim 39.
16

17 **48.** One or more computer-readable media having computer-readable
18 instructions thereon which, when executed by a computer, implement the method
19 of claim 39.
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